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**Section 1 - PRODUCT AND COMPANY IDENTIFICATION**

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**Material Name**

Mule-Hide TPO Bonding Adhesive

**Synonyms**

Contact Adhesive

**Chemical Family**

Adhesive

**Product Use**

Contact Adhesive for TPO Single-ply roofing.

**Restrictions on Use**

For industrial use only.

**Manufacturer Information:**

Carlisle SynTec  
1285 Ritner Highway  
Carlisle, PA 17013  
USA  
Phone: +1-800-479-6832  
Emergency Phone #: +1-800-424-9300 (CHEMTREC)

**Supplier Information:**

Mule-Hide Products Co., Inc  
1195 Prince Hall Dr.  
Beloit, WI 53511  
USA  
Phone: 800-786-1492

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**Section 2 - HAZARDS IDENTIFICATION**

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**Classification in accordance with paragraph (d) of 29 CFR 1910.1200.**

Flammable Liquids - Category 2

Aspiration Hazard - Category 1

Skin Corrosion/Irritation - Category 2

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Carcinogenicity - Category 2

Reproductive Toxicity - Category 1B

Specific Target Organ Toxicity - Single Exposure - Category 1 ( central nervous system, kidneys, liver, respiratory system )

Specific Target Organ Toxicity - Single Exposure - Category 3

Specific Target Organ Toxicity - Repeated Exposure - Category 1 ( central nervous system, respiratory system )

Specific Target Organ Toxicity - Repeated Exposure - Category 2 ( blood, liver )

**GHS Label Elements****Symbol(s)**



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### Signal Word

Danger

### Hazard Statement(s)

Highly flammable liquid and vapor

May be fatal if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

May cause allergic skin reaction

Suspected of causing cancer

May damage fertility or the unborn child

Causes damage to organs

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

May cause damage to organs through prolonged or repeated exposure

### Precautionary Statement(s)

#### Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Keep container tightly closed

Keep away from heat/sparks/open flame/hot surfaces - No smoking

Ground/Bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Take precautionary measures against static discharge

Use only non-sparking tools

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapours/spray

Wash thoroughly after handling

Contaminated work clothing must not be allowed out of the workplace

Do not eat, drink or smoke when using this product

#### Response

In case of fire: Use appropriate media to extinguish

If exposed: Call a POISON CENTER or doctor/physician

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation or rash occurs: Get medical advice/attention

IF SWALLOWED: Immediately call a POISON CENTER/doctor

Do NOT induce vomiting

Specific treatment (see label)



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### Storage

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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CAS	Component Name	Percent
Mixture	Polychloroprene	7-13
Mixture	Styrene butadiene polymer	0.5-1.5
Mixture	Chlorinated polypropylene	0.1-1
Trade Secret	Polyphenol antioxidant	0.1-1
1309-48-4	Magnesium oxide	0.1-1
1314-13-2	Zinc oxide	0.1-1
Trade Secret	Heat reactive phenolic resin	1-5
108-88-3	Toluene	15-40
64742-89-8	Solvent naphtha, petroleum, light aliphatic	10-30
67-64-1	Acetone	5-10
1330-20-7	Xylene	0.5-1.5
100-41-4	Ethylbenzene	0.1-1

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## Section 4 - FIRST AID MEASURES

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### Description of Necessary Measures

If exposed or concerned: Call a POISON CENTER or doctor/physician.

### Inhalation

Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.



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### **Skin**

Remove contaminated clothing and wash it before reuse. Rinse skin with water/shower. If skin irritation or rash occurs, seek medical advice/attention.

### **Eyes**

Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

### **Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting.

### **Indication of any immediate medical attention and special treatment needed**

Treat symptomatically and supportively.

### **Most Important Symptoms/Effects**

#### **Acute**

May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys, liver, and respiratory system. May cause drowsiness or dizziness.

#### **Delayed**

Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: central nervous system, respiratory system, blood, liver.

### **Note to Physicians**

Contains: toluene, heptane.

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## **Section 5 - FIRE FIGHTING MEASURES**

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### **Extinguishing Media**

#### **Suitable Extinguishing Media**

Dry chemical, foam or carbon dioxide. Water may be ineffective.

#### **Unsuitable Extinguishing Media**

Do not use high-pressure water streams.

### **Special Hazards Arising from the Chemical**

Highly flammable liquid and vapor. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flashback.

### **Hazardous Combustion Products**

Oxides of carbon, oxides of nitrogen

### **Advice for firefighters**

Keep away from heat/sparks/open flame/hot surfaces - No smoking. Ground/bond container and receiving equipment. Take action to prevent static discharges.

### **Fire Fighting Measures**

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

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**Section 6 - ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment and Emergency Procedures**

Wear personal protective clothing and equipment, see Section 8.

**Methods and Materials for Containment and Cleaning Up**

Remove all sources of ignition. Avoid breathing vapors. Ventilate affected area. Absorb with earth, sand or other non-combustible material and transfer to container. Dike for later disposal. Dispose in accordance with all applicable regulations.

**Environmental Precautions**

Avoid release to the environment.

**Section 7 - HANDLING AND STORAGE****Precautions for Safe Handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge. Use non-sparking tools. Use only outdoors or in a well-ventilated area. Vapors will travel. Prevent vapors from entering buildings through open windows or ventilation systems. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. **KEEP OUT OF REACH OF CHILDREN.**

**Conditions for Safe Storage, Including any Incompatibilities**

Store in a well-ventilated place. Keep container tightly closed  
Keep cool. Store locked up .Keep away from heat and ignition sources. Do not cut, puncture, or weld on or near this container. Empty containers may contain product residue.

**Incompatible Materials**

Acids, bases, strong oxidizing agents

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION****Component Exposure Limits**

<b>Styrene butadiene polymer</b>	Mixture	
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust	
OSHA (US):	15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction	
Mexico:	10 mg/m3 TWA LMPE-PPT	20 mg/m3 STEL [LMPE-CT]

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<b>Magnesium oxide</b>	1309-48-4	
ACGIH:	10 mg/m3 TWA inhalable fraction	
NIOSH:	750 mg/m3 IDLH fume	
OSHA (US):	15 mg/m3 TWA fume, total particulate	
Mexico:	10 mg/m3 TWA LMPE-PPT as Mg fume	
<b>Zinc oxide</b>	1314-13-2	
ACGIH:	2 mg/m3 TWA respirable fraction	10 mg/m3 STEL respirable fraction
NIOSH:	5 mg/m3 TWA dust and fume	10 mg/m3 STEL fume
	15 mg/m3 Ceiling dust	500 mg/m3 IDLH
OSHA (US):	5 mg/m3 TWA fume; 15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction	
Mexico:	5 mg/m3 TWA LMPE-PPT fume; 10 mg/m3 TWA LMPE-PPT dust	
	10 mg/m3 STEL [LMPE-CT] fume	
<b>Toluene</b>	108-88-3	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 375 mg/m3 TWA	150 ppm STEL; 560 mg/m3 STEL
	500 ppm IDLH	
Europe:	50 ppm TWA; 192 mg/m3 TWA	100 ppm STEL; 384 mg/m3 STEL
	Possibility of significant uptake through the skin	
OSHA (US):	200 ppm TWA	300 ppm Ceiling
Mexico:	50 ppm TWA LMPE-PPT; 188 mg/m3 TWA LMPE-PPT	
	Skin - potential for cutaneous absorption	
<b>Acetone</b>	67-64-1	
ACGIH:	250 ppm TWA	500 ppm STEL
NIOSH:	250 ppm TWA; 590 mg/m3 TWA	2500 ppm IDLH (10% LEL)
Europe:	500 ppm TWA; 1210 mg/m3 TWA	

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OSHA (US):	1000 ppm TWA; 2400 mg/m3 TWA	
Mexico:	1000 ppm TWA LMPE-PPT; 2400 mg/m3 TWA LMPE-PPT	
	1260 ppm STEL [LMPE-CT]; 3000 mg/m3 STEL [LMPE-CT]	
<b>Xylene</b>	1330-20-7	
ACGIH:	100 ppm TWA	150 ppm STEL
Europe:	50 ppm TWA (pure); 221 mg/m3 TWA (pure)	100 ppm STEL (pure); 442 mg/m3 STEL (pure)
	Possibility of significant uptake through the skin	
OSHA (US):	100 ppm TWA; 435 mg/m3 TWA	
Mexico:	100 ppm TWA LMPE-PPT; 435 mg/m3 TWA LMPE-PPT	
	150 ppm STEL [LMPE-CT]; 655 mg/m3 STEL [LMPE-CT]	
<b>Ethylbenzene</b>	100-41-4	
ACGIH:	20 ppm TWA	
NIOSH:	100 ppm TWA; 435 mg/m3 TWA	125 ppm STEL; 545 mg/m3 STEL
	800 ppm IDLH (10% LEL)	
Europe:	100 ppm TWA; 442 mg/m3 TWA	200 ppm STEL; 884 mg/m3 STEL
	Possibility of significant uptake through the skin	
OSHA (US):	100 ppm TWA; 435 mg/m3 TWA	
Mexico:	100 ppm TWA LMPE-PPT; 435 mg/m3 TWA LMPE-PPT	
	125 ppm STEL [LMPE-CT]; 545 mg/m3 STEL [LMPE-CT]	

**Biological limit value**

There are no biological limit values for any of this product's components.

**Engineering Controls**

Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**Individual Protection Measures, such as Personal Protective Equipment**
**Eye/face protection**

Wear chemical safety goggles with a faceshield to protect against skin and eye contact when appropriate.

**Skin Protection**

Wear work clothes with long sleeves. Wear protective shoes.



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### Respiratory Protection

A NIOSH approved air-purifying respirator with an appropriate cartridge or canister may be appropriate under certain circumstances where airborne concentrations are expected to exceed exposure limits.

### Glove Recommendations

Wear appropriate chemical resistant gloves.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	yellowish liquid	<b>Physical State</b>	liquid
<b>Odor</b>	hydrocarbon	<b>Color</b>	yellowish
<b>Odor Threshold</b>	Not available	<b>pH</b>	Not available
<b>Melting Point</b>	-95 - -47 °C (-139--53 °F)	<b>Boiling Point</b>	56 - 137 °C (133-279 °F)
<b>Freezing point</b>	Not available	<b>Evaporation Rate</b>	3.2
<b>Boiling Point Range</b>	Not available	<b>Flammability (solid, gas)</b>	Not available
<b>Autoignition</b>	230 °C (475 °F)	<b>Flash Point</b>	-20 °C (-4 °F)
<b>Lower Explosive Limit</b>	1 %	<b>Decomposition</b>	Not available
<b>Upper Explosive Limit</b>	12.8 %	<b>Vapor Pressure</b>	54.1 mmHg
<b>Vapor Density (air=1)</b>	3.2	<b>Specific Gravity (water=1)</b>	Not available
<b>Water Solubility</b>	Negligible	<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Viscosity</b>	2500 cps	<b>Solubility (Other)</b>	Hydrocarbons
<b>Density</b>	0.849 (relative)	<b>VOC</b>	670 g/L

### Other Information

No additional information available.

## Section 10 - STABILITY AND REACTIVITY

### Reactivity

No reactivity hazard is expected.

### Chemical Stability



Stable under normal conditions of use.

**Possibility of Hazardous Reactions**

Hazardous polymerization will not occur.

**Conditions to Avoid**

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

**Incompatible Materials**

Acids, bases, strong oxidizing agents

**Hazardous decomposition products**

Oxides of carbon, oxides of nitrogen

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**Section 11 - TOXICOLOGICAL INFORMATION**

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**Information on Likely Routes of Exposure****Inhalation**

May cause drowsiness or dizziness. May cause respiratory irritation.

**Skin Contact**

Causes skin irritation. May cause allergic skin reaction.

**Eye Contact**

Causes serious eye irritation.

**Ingestion**

May be fatal if swallowed and enters airways. May cause gastrointestinal irritation.

**Acute and Chronic Toxicity****Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Polychloroprene (Mixture)

Oral LD50 Rat 20000 mg/kg

Styrene butadiene polymer (Mixture)

Oral LD50 Rat 6450 mg/kg

Chlorinated polypropylene (Mixture)

Oral LD50 Rat 5000 mg/kg

Polyphenol antioxidant (Trade Secret)

Oral LD50 Rat >5000 mg/kg

Dermal LD50 Rabbit >5000 mg/kg

Inhalation LC50 Rat >165 mg/L 1 h

Magnesium oxide (1309-48-4)

Oral LD50 Rat >5000 mg/kg

Zinc oxide (1314-13-2)

Oral LD50 Rat >15000 mg/kg  
Inhalation LC50 Rat >5.7 mg/L

**Toluene (108-88-3)**

Oral LD50 Rat >7000 mg/kg  
Dermal LD50 Rabbit 12 - 14 g/kg  
Inhalation LC50 Rat 30 - 35 mg/L

**Solvent naphtha, petroleum, light aliphatic (64742-89-8)**

Oral LD50 Rat >2000 mg/kg  
Dermal LD50 Rat >2000 mg/kg  
Inhalation LC50 Rat >5000 ppm 1 hr

**Acetone (67-64-1)**

Oral LD50 Rat 5800 mg/kg  
Dermal LD50 Guinea pig >7246 mg/kg  
Inhalation LC50 Rat 32000 ppm 4 h

**Xylene (1330-20-7)**

Oral LD50 Rat 4300 mg/kg  
Dermal LD50 Rabbit >2000 mg/kg  
Inhalation LC50 Rat 29.08 mg/L 4 h

**Ethylbenzene (100-41-4)**

Oral LD50 Rat 3500 mg/kg  
Dermal LD50 Rabbit 15400 mg/kg  
Inhalation LC50 Rat 4000 ppm 4 hr

**Immediate Effects**

May be fatal if swallowed and enters airways. Cause skin irritation. Causes serious eye irritation. May cause allergic skin reaction. Causes damage to central nervous system, kidneys, liver, and respiratory system. May cause drowsiness or dizziness.

**Delayed Effects**

Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure: central nervous system, respiratory system, blood, liver.

**Irritation/Corrosivity Data**

Causes skin irritation. Causes serious eye irritation.

**Respiratory Sensitization**

No data available.

**Dermal Sensitization**

May cause allergic skin reaction.

**Component Carcinogenicity**

<b>Polychloroprene</b>	Mixture
IARC:	Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

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<b>Magnesium oxide</b>	1309-48-4
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
<b>Toluene</b>	108-88-3
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
<b>Acetone</b>	67-64-1
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
<b>Xylene</b>	1330-20-7
ACGIH:	A4 - Not Classifiable as a Human Carcinogen
IARC:	Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))
<b>Ethylbenzene</b>	100-41-4
ACGIH:	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
IARC:	Monograph 77 [2000] (Group 2B (possibly carcinogenic to humans))
DFG:	Category 4 (no significant contribution to human cancer)
OSHA:	Present

### **Germ Cell Mutagenicity**

No data available.

### **Reproductive Toxicity**

May damage fertility or the unborn child.

### **Specific Target Organ Toxicity - Single Exposure**

central nervous system, liver, respiratory system, kidneys

### **Specific Target Organ Toxicity - Repeated Exposure**

central nervous system, liver, respiratory system, blood

### **Aspiration hazard**

May be fatal if swallowed and enters airways.

### **Medical Conditions Aggravated by Exposure**

May cause allergic skin reaction. Aspiration into the lungs may cause chemical pneumonitis.

**Additional Data**

No additional information available.

## Section 12 - ECOLOGICAL INFORMATION

**Ecotoxicity**

Avoid release to the environment.

**Component Analysis - Aquatic Toxicity**

<b>Polyphenol antioxidant</b>	Trade Secret
Fish:	LC50 96 h Oncorhynchus mykiss >0.2 mg/L [semi-static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata >0.2 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna >0.2 mg/L IUCLID
<b>Toluene</b>	108-88-3
Fish:	LC50 96 h Pimephales promelas 15.22 - 19.05 mg/L [flow-through] (1 day old); LC50 96 h Pimephales promelas 12.6 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.89 - 7.81 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 14.1 - 17.16 mg/L [static]; LC50 96 h Oncorhynchus mykiss 5.8 mg/L [semi-static]; LC50 96 h Lepomis macrochirus 11 - 15 mg/L [static]; LC50 96 h Oryzias latipes 54 mg/L [static]; LC50 96 h Poecilia reticulata 28.2 mg/L [semi-static]; LC50 96 h Poecilia reticulata 50.87 - 70.34 mg/L [static]
Algae:	EC50 96 h Pseudokirchneriella subcapitata >433 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 12.5 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 5.46 - 9.83 mg/L [static] EPA; EC50 48 h Daphnia magna 11.5 mg/L IUCLID
<b>Solvent naphtha, petroleum, light aliphatic</b>	64742-89-8
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4700 mg/L IUCLID
<b>Acetone</b>	67-64-1
Fish:	LC50 96 h Oncorhynchus mykiss 4.74 - 6.33 mL/L;

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	LC50 96 h Pimephales promelas 6210 - 8120 mg/L [static]; LC50 96 h Lepomis macrochirus 8300 mg/L
Invertebrate:	EC50 48 h Daphnia magna 10294 - 17704 mg/L [static] EPA; EC50 48 h Daphnia magna 12600 - 12700 mg/L IUCLID
<b>Xylene</b>	1330-20-7
Fish:	LC50 96 h Pimephales promelas 13.4 mg/L [flow-through]; LC50 96 h Oncorhynchus mykiss 2.661 - 4.093 mg/L [static]; LC50 96 h Oncorhynchus mykiss 13.5 - 17.3 mg/L; LC50 96 h Lepomis macrochirus 13.1 - 16.5 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 19 mg/L; LC50 96 h Lepomis macrochirus 7.711 - 9.591 mg/L [static]; LC50 96 h Pimephales promelas 23.53 - 29.97 mg/L [static]; LC50 96 h Cyprinus carpio 780 mg/L [semi-static]; LC50 96 h Cyprinus carpio >780 mg/L; LC50 96 h Poecilia reticulata 30.26 - 40.75 mg/L [static]
Invertebrate:	EC50 48 h water flea 3.82 mg/L; LC50 48 h Gammarus lacustris 0.6 mg/L
<b>Ethylbenzene</b>	100-41-4
Fish:	LC50 96 h Oncorhynchus mykiss 11 - 18 mg/L [static]; LC50 96 h Oncorhynchus mykiss 4.2 mg/L [semi-static]; LC50 96 h Pimephales promelas 7.55 - 11 mg/L [flow-through]; LC50 96 h Lepomis macrochirus 32 mg/L [static]; LC50 96 h Pimephales promelas 9.1 - 15.6 mg/L [static]; LC50 96 h Poecilia reticulata 9.6 mg/L [static]
Algae:	EC50 72 h Pseudokirchneriella subcapitata 4.6 mg/L IUCLID; EC50 96 h Pseudokirchneriella subcapitata >438 mg/L IUCLID; EC50 72 h Pseudokirchneriella subcapitata 2.6 - 11.3 mg/L [static] EPA; EC50 96 h Pseudokirchneriella subcapitata 1.7 - 7.6 mg/L [static] EPA
Invertebrate:	EC50 48 h Daphnia magna 1.8 - 2.4 mg/L IUCLID

**Persistence and Degradability**

No information available for the product.

**Bioaccumulative Potential**

No information available for the product.

**Mobility**

No information available for the product.

**Other Toxicity**

No additional information available.



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### Section 13 - DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 14 - TRANSPORT INFORMATION

#### US DOT Information:

**Shipping Name:**Adhesives

**Hazard Class:** 3

**UN/NA #:** UN1133

**Packing Group:** II

**Required Label(s):** 3

**Additional information:** Special Provisions (172.102): 149, B52, IB2, T4, TP1, TP8

#### IATA Information:

**UN#:** UN1133

#### IMDG Information:

**UN#:** UN1133

#### TDG Information:

**UN#:** UN1133

### Section 15 - REGULATORY INFORMATION

#### U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

<b>Toluene</b>	108-88-3
SARA 313:	1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ
<b>Acetone</b>	67-64-1
CERCLA:	5000 lb final RQ; 2270 kg final RQ
<b>Xylene</b>	1330-20-7
SARA 313:	1 % de minimis concentration
CERCLA:	100 lb final RQ; 45.4 kg final RQ

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<b>Ethylbenzene</b>	100-41-4
SARA 313:	0.1 % de minimis concentration
CERCLA:	1000 lb final RQ; 454 kg final RQ

**SARA Section 311/312 (40 CFR 370 Subparts B and C)**

**Acute Health:** Yes **Chronic Health:** Yes **Fire:** Yes **Pressure:** No **Reactivity:** No

**U.S. State Regulations**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Styrene butadiene polymer	Mixture	No	Yes	Yes	Yes	Yes
Magnesium oxide	1309-48-4	Yes	Yes	Yes	Yes	Yes
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes
Toluene	108-88-3	Yes	Yes	Yes	Yes	Yes
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes
Xylene	1330-20-7	Yes	Yes	Yes	Yes	Yes
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	Yes

**The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):**

WARNING! This product contains a chemical known to the state of California to cause cancer

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects

Toluene	108-88-3
Repro/Dev. Tox	developmental toxicity , 1/1/1991
Ethylbenzene	100-41-4
Carc:	carcinogen , 6/11/2004

**Canadian WHMIS Ingredient Disclosure List (IDL)**

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL

<b>Magnesium oxide</b>	1309-48-4
	1 %
<b>Zinc oxide</b>	1314-13-2
	1 %

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<b>Toluene</b>	108-88-3
	1 %
<b>Acetone</b>	67-64-1
	1 %
<b>Ethylbenzene</b>	100-41-4
	0.1 %

### Component Analysis - Inventory

#### Polychloroprene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Styrene butadiene polymer (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	NSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Chlorinated polypropylene (Mixture)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

#### Polyphenol antioxidant (Trade Secret)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

#### Magnesium oxide (1309-48-4)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

#### Zinc oxide (1314-13-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes



## Safety Data Sheet

**Material Name: Mule-Hide TPO Bonding Adhesive**
**SDS 10-2310**
**Toluene (108-88-3)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

**Solvent naphtha, petroleum, light aliphatic (64742-89-8)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes

**Acetone (67-64-1)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

**Xylene (1330-20-7)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

**Ethylbenzene (100-41-4)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

**Yellow dye (2481-94-9)**

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

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### Section 16 - OTHER INFORMATION

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**HMIS Rating**

Health: 2\* Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

**NFPA Ratings**



## Safety Data Sheet

**Material Name: Mule-Hide TPO Bonding Adhesive**

**SDS 10-2310**

Health: 2 Fire: 3 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

### Summary of Changes

New SDS: April 28, 2015

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

### Other Information

#### Disclaimer:

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